CURRENT JOURNALS

Bridge of Nose-Eyelid Reflex.—Investigations have been carried out on the diagnostic value and anatomo-biological foundations of reflexes. The reflex here discussed is obtained by striking the bridge or tip of the nose, and consists in simultaneous contraction of both orbiculares oculi. The author's material consisted of normal human beings and also those with lesions of the facial nerve and certain organic diseases of the C.N.S. He considers that his findings can be used for locating lesions of the facial nerve. (H. de P.)

Tumours of Third Ventricle.—Clinical manifestations are usually slight and often deceptive, and localizing signs more rare than in other cerebral tumours. Neurological examination often gives negative results. The tumour can only be recognized with certainty by ventriculography and this should be done in all suspected cases. (H. de P.)

Poisoning with Chlorine-Carbon Compounds.—The poisonous qualities of chlorine-carbon compounds are discussed with special reference to the protection of industrial workers engaged in the manufacture of these substances—notably trichlorethylene and tetrachlorethylene. A case of chronic poisoning with trichlorethylene is described. He proceeded to investigate the incidence of such poisoning in different groups and advised against the employment of young people, women, and men over 45 with any tendency to arteriosclerosis, in such manufacture. Alcohol also produces hypersensitivity to substances of this group. (H. de P.)

Chronic Alcoholism resembling "Pseudo-General Paralysis."—Four cases showing an atypical form of chronic alcoholism are described, which resemble the "pseudo-G.P.I." of the ancient authors in both positive and negative features. These cases all had negative Wassermann reactions and signs of alcoholic gastritis; all had had attacks of atypical delirium tremens. Histological changes in the brain tissue are described which suggest the name "alcoholic laminary sclerosis." (H. de P.)

BOOK REVIEWS

SYMPOSIUM ON THE SYNAPSE


(Chas. C. Thomas, Springfield, Ill. 1939. Pp. 113. $2.00)

During the past few years there has been considerable controversy over the mechanism of synaptic transmission. One school believes that transmission depends upon the liberation of acetyl choline; the other holds that it is brought about by local electric circuits of the same type as those which propagate nervous impulses along axons. The "Symposium on the Synapse" was written with this controversy in mind. Dr. Gasser, Professor Erlanger, and Dr. Lorente de Nö appear to favour the electrical theory, for they stress the similarities between synapses and peripheral nerves; Dr. Forbes reviews the evidence for both theories, but commits himself to neither; while Dr. Bronk adopts a pluralistic view, in which acetyl choline, inorganic ions, and electric currents all contribute towards transmission across the synapse. The material covered covers a wide range and is not strictly confined to synaptic problems. After-potentials and recovery in peripheral nerve, the blockage of conduction, and the spatial distribution of bioelectric currents are among the subjects discussed. Much of the experimental work has already been described in scientific journals, but the articles by Dr. Lorente de Nö and Dr. Bronk are largely based on new material. Dr. Bronk is particularly interesting and gives an excellent account of the way in which electrolytes affect transmission through synapses in the sympathetic system. He also describes interesting experiments on summation, fatigue, and recovery in the stellate ganglion.
BOOK REVIEWS

EPIDEMIC ENCEPHALITIS

Third Report by the Matheson Commission.

(Columbia University Press, New York. 1939. Pp. 493. $3.00)

The preparation of periodic surveys of the field of epidemic encephalitis has been one of the objects of the Matheson Commission. This Third Report brings the review of the literature up to the first half of 1938. There are included adequate reviews of the epidemiology of the St. Louis Type and Japanese B Encephalitis, and in these lies much of the merit of the volume. It is unfortunate that the bibliography should occupy more than half the book when the laboratory and clinical work of the Commission, which consisted in part in a follow-up study of encephalitic patients for long periods, should be scantily documented in a few pages. Some attempts at treatment have been based on Levaditi's suggestion that epidemic encephalitis may be due to a neurotropic form of a herpes virus. Results are presented for treatment with a formalinized herpes virus in the acute stage. "The case fatality of treated cases has been less than half that of the untreated cases. Moreover, the neurological conditions have seemed to disappear more rapidly in treated cases." Further data as to the effect of treatment on development of the chronic stage of the disease will make a contribution of importance in the study of the disease.

ELECTRICAL EXCITATION OF NERVE

B. Katz

(Oxford University Press, London. 1939. Pp. 151. 10s. 6d.)

This book is a review of recent advances in the study of excitable tissues. It begins with an account of the mathematical theories which have been used to describe the excitation process. Classical experiments showed that an electric current would not excite a nerve, unless it satisfied certain conditions. First, the stimulus must exceed a certain limiting strength; secondly, it must rise at a minimal rate; and, thirdly, a definite quantity of electricity must flow through the tissue. These facts are not easy to incorporate in a simple hypothesis, but the regularity of the excitation process encouraged many physiologists to propose comprehensive mathematical theories. The most well known are those of Hill, Monnier, and Rashevsky. Dr. Katz deals fully with these and emphasizes their basic similarity. He shows that they are capable of co-ordinating a large number of experimental facts, but break down when a detailed analysis is made. The second part of the book deals with the more recent physical concepts, which have to a certain extent replaced these theories. The cable-like structure of nerve is discussed and its importance emphasized. This leads on to the subject of conduction, and Dr. Katz shows how the information obtained in excitation studies can be used to explain the transmission of nervous messages. The final chapters contain a clear account of recent work on subthreshold action potentials and the initiation of nervous impulses. Dr. Katz's review will be of considerable interest to biophysicists, since it contains a great deal of information which has never been collected before. A possible criticism is that too much space is devoted to a consideration of empirical theories, which are known to be at variance with more recent observations. A second criticism, which applies more to the subject than to the book itself, is the complexity of the terminology. Only a specialist will avoid being confused by an array like the following: physiological electrotonus, heterochronism, hauptnutzzeit, subordination, etc. The author obviously feels this difficulty, but it would have been impossible to simplify the book without making it less comprehensive. Dr. Katz might have done this if his original manuscript had been written as a monograph; but, as he explains in the preface, the review was first written at the invitation of the Ergebnisse der Physiologie, whose publishers finally refused it because the author was not of Aryan race.
This work is a valuable and important contribution to neurological literature. It contains a very full selection of Sherrington’s work and reprints, and the most important parts of many papers, some of which are not readily available.

Though all from the pen of Sherrington and his collaborators it gives a picture of the development of the physiology of the nervous system during the past sixty years and of the change in attitude to the nervous system that has occurred during his lifetime and owes so much to his own work. For this change is clear in this selection. First, concentration on anatomical relationships and the distribution of nerves and nerve roots. Then, as these were clarified, moving to concentration on their functional relationships and analysis of the control of movement and reflex activity leading to the concepts of central excitatory and inhibitory states. Finally, analysis of the relationship of excitation and inhibition at the synapse and of the activity of single neurones.

The selection has been well carried out to give a continuous and readable treatise rather than a number of juxtaposed cuttings. It has been edited by one of his distinguished pupils, who in his selection has brought out Sherrington’s attitude to the nervous system, and his powers of making fundamental discoveries from simple but meticulously accurate observation. In reading some of the papers written forty years ago it is striking how they remain as valuable as when written owing to the extreme accuracy in description and practical detail. The editorial notes give briefly the necessary explanation of the context of parts of papers selected. The arrangement is in general chronological, with such departures as are necessary for continuity of subject-matter.

The earlier sections give Sherrington’s work on nerve roots, their distribution and overlap, followed by mapping of reflex fields by stimulation of sensory nerves and roots. The next sections deal with the reflex reactions to induction shocks, and charting the fractional contraction of various muscles taking part in flexor reflexes. Next are given extracts from papers on inhibition and co-ordination followed by a full selection of work on postural reflexes, tonus, and the stretch reflex. This is perhaps the most satisfying of all reflex work in that Sherrington and Liddel were able to explore the central processes using a normal sensory stimulus, stretch of proprioceptive end organs. They thus avoided the artificialities of electrical excitation and yet were able to control and grade the stimulus with great precision. The reflexes involved were of much greater complexity than the flexion reflex to noxious stimulation, and a far more precise analysis was possible than in the case of the scratch reflex. Section IX contains extracts from papers on the cortex, localization, and facilitation. In Section X are full extracts from Sherrington’s work with Eccles on the detailed analysis of the flexor reflex and observations of the behaviour of single motor units, which correlates Sherrington’s work with that of Adrian on the detailed analysis of single nervous pathways. There are a number of line illustrations, and a full bibliography is appended. The passage selected as epilogue from the Rede Lecture is a happy expression of Sherrington’s breadth of view and penetration to the realms of philosophy.

This book is a valuable work for students and neurologists and a worthy tribute to one who it is safe to say has done more to clarify the working of the nervous system than any other man.
BOOK REVIEWS

NEUROLOGY

S. A. Kinnier Wilson


In recent years there have been published throughout the world many text-books
of neurology. In view of this spate, the neurologists of this country have often
remarked on the absence of a modern authoritative work by a British author and the
need for such a work expressive of the outlook of British neurology. This need has
now been remedied by the publication of a work on neurology consisting of two
volumes by the late Dr. Kinnier Wilson.

Known by his friends to have been busy in the compilation of such a work for
many years, it was with deep regret that the news of his premature and unexpected
death was received. Fortunately Dr. Wilson had collected much material and had
already prepared before his death the text for a book on neurology. By carefully
and scrupulously following his plans it has been possible for Dr. Ninian Bruce to
complete this book for publication "to all extents unaltered and as it left Dr. Wilson's
pen."

The reviewer is immediately impressed with the magnitude of the work, for in
these two volumes is gathered together information of an encyclopaedic character.
The description of clinical entities are clear and succinct; in them, too, is expressed
Dr. Wilson's own view-point. Care has been taken to make the pathological informa-
tion full yet concise, and the surveys of the experimental pathology will be invaluable
—an addition which adds considerably to the value of the book. Therapeutic con-
siderations have received close attention, and practitioners, as well as neurologists,
seeking aid in this sphere of neurology will be well rewarded.

In Part I toxic infective diseases of the nervous system are dealt with. Herein
are described meningitis, encephalitis, demyelinating conditions and myelitis, radiculitis
and neuritis. The chapter given to disseminated sclerosis is very full and the various
theories as to possible causation are fully discussed. It is to be regretted that an
indication of the author's own view-point as to the possible cause is not readily
available—this would have been welcomed. Also a note on comparative pathology
might have enhanced this chapter. Part II deals with special forms of toxic infection
of the nervous system which include neurosyphilis, tubercle, tetanus, herpes, rabies,
and loping-ill. The chapters on neurosyphilis are most informative and clear; therapy
is adequately discussed and in detail. In Part III special forms of toxicosis
of the nervous system are considered, such as alcoholism, morphinism, etc. The
modern conception of alcoholic neuritis being the result of a deficiency receives
adequate and critical analysis. Part IV, in the larger of the two volumes, contains
descriptions of the varieties of familial and non-familial degenerative conditions.
These chapters are of particular value, as these conditions were of great interest to the
author and a field in which he carried out much original work; for instance, his own
work on progressive lenticular degeneration. The very wide grasp of the literature
and personal experience of Dr. Wilson show clearly in these chapters. Part V—
diseases of vascular origin—and Part VI—tumours of the nervous system—contain all
matter that is relevant to these subjects. In Parts VII and VIII metabolic and
congenital conditions are described. Epilepsy and migraine are treated at length
and in detail in the following parts. The author's powers of description are shown
to their best in these chapters, which merit reading by all members of the medical
profession. The chapter given to family periodic paralysis is disappointing in that
the more recent work on the chemical changes in the blood found in this condition
and the treatment are not mentioned. It is to be remembered that with a work of
this magnitude, material may have been in the hands of the printers before the
publication of the investigations on the biochemical disturbances found in this rare
disease and that this is a criticism to which any book may be open. The neuroses are
BOOK REVIEWS

dealt with in the last part. It is unfortunate that the author has not seen it possible to devote more space to his views on these conditions. An excellent index and abundant references to the literature augment the usefulness of the book.

This is a book which should find a place in the library of every neurologist throughout the world, for in it information is collected in a manner to be found nowhere else. As a book of reference it will prove inestimable; as an aid to specialist and teacher it stands unique.

RECENT ADVANCES IN NEUROLOGY

W. Russell Brain


Another addition of this very useful book appears. Several additional chapters have been included. The new chapters on headache and electro-encephalography are of particular interest. In the chapter on neurotropic viruses the treatment of anterior poliomyelitis with serum is critically discussed. The reader, however, does not receive real guidance as to the value of this form of therapy, as the author is careful not to express any precise views. A guide to general practitioner and neurologist on this point would have been invaluable. The reproductions of X-ray films are disappointing and this should be corrected in future additions. A more complete index would make reference more easy.

THE LANGUAGE OF GESTURE

Macdonald Critchley

(Edward Arnold and Co., London. 1939. Pp. 128. 5s.)

The language of gesture is of such common and constant usage that its importance must often pass unnoticed. Yet speech itself without its accompanying gesture of expression is an unlovely monotone. In the theatre mime and gesture are of supreme value; the difference in their quality is the difference between an expert and an unskilled performance. The author's interest in the subject was attracted by the case of a deaf mute who had sustained a small vascular lesion in the left hemisphere which, although there was no paralysis, resulted in a defect in the powers of expression by way of his accustomed sign talk. He discusses the relationship of gesture and speech, and concludes that the two faculties seem to have developed side by side rather than that one is a forerunner of the other. There is an excellent chapter on the neurology of gesture in which variations of a pantomime and gesture in abnormal neurological and psychiatric states are discussed. The subject is reviewed from many other aspects, including a comparison of the sign language of different races. Dr. Critchley has written an interesting and stimulating book which will well repay the attention of both doctors and laymen.